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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,310	02/20/2001	Geoffrey Wen Tai Shuy	0941-0223P-SP	1991

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EXAMINER

MCPHERSON, JOHN A

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/785,310

Applicant(s)

SHUY ET AL.

Examiner

John A. McPherson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-7,9-16,18-21 and 23-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,9-16,18-21 and 23-39 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/10/03 has been entered.

Claim Objections

2. Claim 1 is objected to because of the following informalities: in line 9, "IP" should be corrected to --InP-- (see page 7, line 7 of the specification). Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 27 and 29-39 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an optical recording medium having a transparent layer comprising In-Sn oxide, tin oxide, indium oxide, zinc oxide, titanium oxide, Sb-Sn oxide, or combinations thereof (i.e. the specific oxides set forth in the

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original disclosure), does not reasonably provide enablement for an optical recording medium having a transparent layer comprising "at least an oxide" (i.e. any oxide, including oxides not disclosed in the specification, such as tungsten oxide, etc.). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Newly present claim 27 is drawn to an optical recording medium wherein the transparent layer comprises "at least an oxide", however this generic embodiment is not described and enabled by the specification, which discloses only the specific oxides referred to above. Therefore, a transparent layer comprising "at least an oxide" is considered to be new matter. Claims 28 is not included in this rejection because it limits the oxide to those described and enabled in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-7, 9-16, 18-21 and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 6-171236 (JP '236) for the reasons of record as set forth in paragraph 1 of the First Office Action dated 8/2/02, and as further discussed below.

5. Claims 1, 4-7, 9-16, 18-21 and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 822 543 (EP '543). EP '543 discloses a write-once optical disk comprising a substrate, a reactive layer and a reflective layer, wherein the reactive layer comprises one of Si, Ge, InSb, GaAs, InP and GaP, and the reflective layer comprises at least one of Al, Au, Cu, In, Ga and Sn. Upon recording, diffusion and segregation occur at the interface formed by the reactive layer and reflective layer, so that modulation by reducing the reflectivity at certain positions of the optical disk can be achieved. See the abstract; column 1, lines 21-36; column 3, lines 17-46; column 4, lines 41-45; column 5, lines 7-47; and claim 1-2.

6. Claims 1, 4-7, 9-16, 18-21 and 23-39 are rejected under 35 U.S.C. 102(b) as being anticipated by WO00/04536 (WO '536). WO '536 discloses an optical disk including a recording layer having a multilayer structure and adapted for changing the optical characteristics of the recording film by projection a laser beam, comprising a substrate, a second layer on the substrate comprising an oxide which dissociates to release oxygen molecules (preferably oxides of Mo, W or Ti), and a first layer on the second layer which includes a metal which bonds (i.e. reacts) with the oxygen (preferably Sn or In). See the abstract and Figure 1. For an English language version of WO '536, see the corresponding national stage U.S. Patent No. 6,335,071; in particular see column 2, lines 21-35; column 3, lines 3-12; column 3, line 60 to column 4, line 19 of U.S. Patent No. 6,335,071.

Response to Arguments

7. Applicant's arguments filed 3/10/03 have been fully considered but they are not persuasive. With respect to the rejection over JP '236 Applicant argues that after thermal diffusion between the interface of the Ge and Al/Au layer, the irradiation area becomes Al/Au-rich and thereby increases the reflectivity, for "low to high" recording, such that the optical contrast after recording is only elevated (i.e. positive), not lowered (i.e. negative). However, this embodiment is within the scope of the claimed invention, which includes either increasing or decreasing the reflectivity, to produce either positive or negative optical contrast.

Furthermore, Applicant argues that to more specifically differentiate the present invention from JP '236, claims 1 and 16 have been amended to recite a transparent layer with a predetermined thickness, for that the reflecting layer will react therewith to form a semi-transparent reflective area (optical or thermal reactant of transparent layer and reflecting layer) which activates an optical recording mechanism that produces optical contrast before and after recording, however the Examiner does not see how this differentiates the present invention from JP '236, wherein the Ge layer of JP '236 also has a predetermined thickness, such that it reacts with the Al/Au layer at their interface to provide an optical contrast between the unrecorded and recorded areas. See the Examples.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. McPherson whose telephone number is (703)

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308-2302. The examiner can normally be reached on Monday through Friday, 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on (703) 308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John A. McPherson
Primary Examiner
Art Unit 1756

JAM
May 5, 2003